



General Description

Polyfet's GAN (on SiC) HEMT power transistors contain no internal matching; making them suitable for both broadband and narrow band applications. The use of a thermally enhanced package enables this device to have superior heat dissipation properties. The high drain break down voltage permits this device to operate over a wide voltage range.



RF POWER GAN TRANSISTOR

20.0 Watts Single Ended

Package Style GX

HIGH EFFICIENCY, LINEAR

HIGH GAIN, LOW NOISE

ROHS COMPLIANT

Suitable for use across 1-3000Mhz

ABSOLUTE MAXIMUM RATINGS (T = 25 °C)

| Total Device Dissipation | Junction to Case Thermal Resistance | Maximum Junction Temperature | Storage Temperature | Drain to Source Voltage | Gate to Source Voltage |
|--------------------------|-------------------------------------|------------------------------|---------------------|-------------------------|------------------------|
| 40 Watts | 3.50 °C/W | 200 °C | -65 °C to 150 °C | 125 V | -10 V to + 2 V |

RF CHARACTERISTICS (20.0 WATTS OUTPUT)

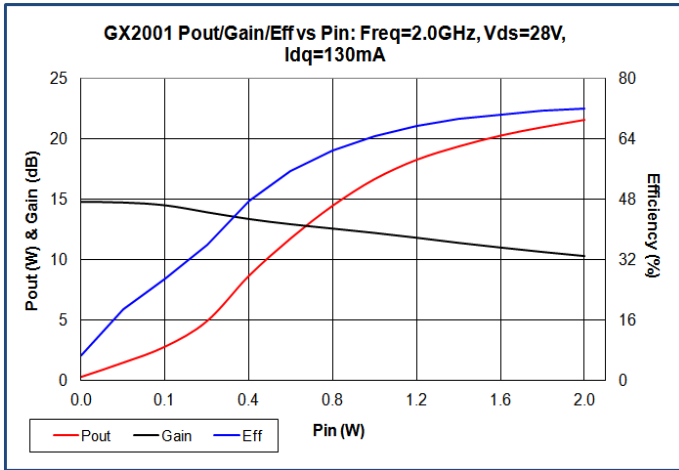
| SYMBOL | PARAMETER | MIN | TYP | MAX | UNITS | TEST CONDITIONS |
|--------|--------------------------|-----|-----|------|----------|---|
| Gps | Common Source Power Gain | 11 | | | dB | Idq = 0.13 A, Vds = 28.0 V, F = 2,000 MHz |
| η | Drain Efficiency | | 65 | | % | Idq = 0.13 A, Vds = 28.0 V, F = 2,000 MHz |
| VSWR | Load Mismatch Tolerance | | | 10:1 | Relative | Idq = 0.13 A, Vds = 28.0 V, F = 2,000 MHz |

ELECTRICAL CHARACTERISTICS (EACH SIDE)

| SYMBOL | PARAMETER | MIN | TYP | MAX | UNITS | TEST CONDITIONS |
|--------|------------------------------------|-----|------|-----|-------|---------------------------------|
| Bvdss | Drain Breakdown Voltage | 125 | | | V | Ids = 7.50mA, Vgs = -8V |
| Idsat | Saturation Current | | 7.20 | | Amp | Vgs = +2V, Vds = 10V |
| Idss | Zero Bias Drain Current | | | 2.0 | mA | Vds = 28.0 V, Vgs = -8V |
| Vgs | Gate Bias for Drain Current | | -2.3 | | V | Vds = 28.0 V Ids = 0.13A |
| Ciss | Common Source Input Capacitance | | 7.4 | | pF | Vds = 28.0 Vgs = -8V, F = 1 MHz |
| Crss | Common Source Feedback Capacitance | | 0.56 | | pF | Vds = 28.0 Vgs = -8V, F = 1 MHz |
| Coss | Common Source Output Capacitance | | 4.5 | | pF | Vds = 28.0 Vgs = -8V, F = 1 MHz |

GX2001

POUT VS PIN GRAPH



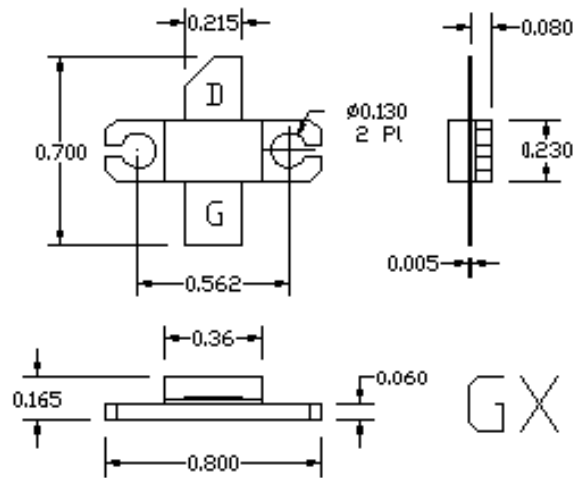
BROADBAND PERFORMANCE

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PACKAGE DIMENSIONS IN INCHES



Tolerance .XX +/-0.01 .XXX +/- .005 inches

POLYFET RF DEVICES

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